

REMARKS

Favorable reconsideration of the subject application, as amended above, is respectfully requested in view of the comments below.

Claims 107 and 163-242 are pending in the present application. Claims 164 and 180-242 are canceled herein. New claims 243-251 are added. Accordingly, claims 107, 163 and 165-179 and 243-251 are presented for examination on the merits.

Claim 163 was amended to recite that synthases having greater than 40% sequence similarity are encompassed by the claim. Support for this amendment is found throughout the specification. Claims 168-179 have been amended to more particularly define the claimed invention without altering the scope of the claims.

New claims 243-251 are added to replace claims 180-242, and are directed to synthases that having sequence similarity to SEQ ID NO. 44 and have a specified amino acid change at one of the alpha-carbons. Support for these claims is found at page 28, lines 11-15, where it is disclosed that mutant terpene synthases can be generated that have one or more amino acids associated with the alpha-carbons of terpene synthases that have been altered.

No new matter is added by these amendments to the claims.

I. Objection to Specification

It is respectfully submitted that the amendment to the specification renders this formal ground of rejection moot.

II. Rejection of Claims Under 35 U.S.C. § 112, First Paragraph

The Examiner states that claim 107 is not supported by written description because the Table in the specification does not specify that the 19 alpha carbons listed therein correspond to the recited residues in SEQ ID NO. 44. This rejection is respectfully traversed as follows.

The specification teaches that there is an active site in each of the synthases disclosed in the specification, and specifically discloses that the active site of SEQ ID NO. 44 is within amino acids 579-847 (p. 27, ll.30-32). The specification also teaches that there are 19 alpha-carbons located in the active site region of the amino acid sequence of SEQ ID NO. 44 (as well as certain other terpene synthases disclosed in the present specification). The specific 19 amino acids within this active site that are in alignment with other terpene synthase active sites are disclosed at page 47, lines 24-30 (Example 11). These 19 amino acids are the amino acids at the positions disclosed in the Table in claim 107. Therefore, the specification provides support for the table in claim 107.

Accordingly, the rejection of claim 107 under 35 U.S.C. § 112, first paragraph, for lack of written description is respectfully traversed.

Claims 163, 164 and 180-242 are rejected under 35 U.S.C. § 112, first paragraph as containing new matter.

It is respectfully submitted that the amendments to claims 163 and 164 render the rejection of these claims moot. Cancellation of claims 180-242 renders the rejection of these claims moot.

III. Rejection of Claims 168-179 Under 35 U.S.C. § 112, Second Paragraph

It is respectfully submitted that the amendment to claims 168-179 renders this formal ground of rejection moot.

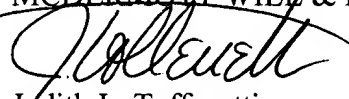
It is respectfully submitted that the present invention, as amended above, is in condition for allowance, an early notification thereof being earnestly requested.

Serial No. 09/893,820

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "J. Toffenetti", written over the printed name.

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Date: June 3, 2004